



SIMULATION PROGRAM FOR INTEGRATED OPTICAL/ELECTRONIC CIRCUIT

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a divisional of U.S. Patent Application Serial No. 09/991,542, filed November 10, 2001, which is a continuation-in-part to U.S. Patent Application Serial No. 09/859,593, filed May 17, 2001. U.S. Patent Application Serial No. 09/991,542 claims priority to U.S. Provisional Patent Application No. 60/293,615, filed May 25, 2001 and U.S. Provisional Patent Application No 60/297,208, filed June 8, 2001.

Field of the Invention

[0002] This invention relates to integrated circuits, and more particularly to integrated circuits including both optical and electronic aspects.

Background of the Invention

[0003] In the electronic integrated circuit industry, there is a continuing effort to increase device speed and increase device densities. Optical systems are a technology that promise to increase the speed and current density of integrated circuits. Various components of optical and electronic integrated circuits can be discrete elements made from glass or clear plastic or alternatively can be formed from a semiconductor material, such as silicon.

[0004] The majority of the semiconductor industry efforts, including a massive number of person-hours of research and development, has focused its efforts on silicon-based electronic circuits in attempting to make electronic circuits faster and more reliable. While other semiconductor technologies such as Ga-As have shown great promise, the emphasis on the research in development in Silicon has reduced the rate of development of the other semiconductors. This concentration on silicon devices has been rewarded by quicker and more reliable silicon devices, however the rate of improvement of silicon-based device speed has decreased in recent years.

[0005] While optical integrated circuits show much promise, there are certain inherent benefits to optical circuits. For instance, at a single level, two electrical

12/10/07
OK to Enter